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NEW ORCHIDS FROM AFRICA

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THIS PAPER contains descriptions of two new genera of Angraecoid orchids and new species belonging to various other genera of African orchids. The type specimens are in the Kew Herbarium unless stated otherwise.

Habenaria (§ **Multipartitae**) **falciloba** *Summerhayes sp. nov.* inter omnes species sectionis labelli lobis lateralibus integris falcatim incurvatis, brachiis stigmatiferis e basi liberis facile distinguitur.

Herba verisimiliter terrestris, circiter 1 m. alta, fere omnino glabra; tubera non visa. *Caulis* erectus, robustus, inferne circiter 1 cm. diametro, fere teres, basi radices numerosas flexuosas 1–2 mm. diametro emittens, inferne cataphyllis paucis vaginantibus apice obtusis superioribus foliaceis instructus, superne circiter 9-foliatus. *Folia* erecto-patentia vel suberecta, late lanceolata, apice \pm acuminata, usque ad 20 cm. longa et 6 cm. lata, sursum decrescentia in bracteas abeuntia, tenuiter coriacea vel subcarnosa. *Racemus* rectus, circiter 25 cm. longus et 8 cm. diametro, subdense circiter 35-florus; rhachis teres, 3–4 mm. diametro; bracteae foliaceae, anguste lanceolatae, acuminatae, subtus leviter carinatae, usque ad 5 cm. longae et 1.5 mm. latae, inferiores flores aequantes. *Flores* adscendentes; pedicellus cum ovario

2–2.5 cm. longus. *Sepalum* intermedium erectum, convexum, oblongo-lanceolatum, apice acutum, circiter 2.75 cm. longum et 8 mm. latum, dorso carinatum, 5-nervium; sepala lateralia erecto-patentia, oblique lateque lanceolata, leviter curvata, apice acuta, circiter 2.75 cm. longa et 1 cm. lata, 5–6-nervia, dorso carinata. *Petala* cum sepalo intermedio agglutinata, falcata, e basi angusta late lanceolato-cultrata, 2.5 cm. longa, supra medium 7 mm. lata, nervis superne \pm divergentibus reticulatis. *Labellum* horizontaliter porrectum, ex ungue 6–7 mm. longo dilatatum, tripartitum, in toto circiter 3 cm. longum et 1.5 cm. latum; partitio intermedia \pm inflexa vel incurvata, linearis, apice obtusa, 16 mm. longa, 2 mm. lata, subcarnosa; partitiones laterales incurvatim falcatae, integrae, quam intermedia duplo latiores, apice acutae, 1.25–1.5 cm. longae, inferne 3.75–4 mm. latae, pluri-nerviae; calcar infra labellum porrectum, leviter recurvatum, dimidio apicali clavato-inflatum, 2 cm. longum, superne 3.5 mm. diametro. *Anthera* 7 mm. alta, hipocrepimorpha; connectivus 5 mm. latus, medio 5.5 mm. altus; loculi fere horizontales vel leviter reclinati, 3.5 mm. longi; canales \pm erecti, graciles, 4 mm. longi; staminodia oblonga, parva, sessilia. *Brachia* stigmatifera basi libera, crasse cylindrica, apice truncatim capitata, 9 mm. longa, inferne pubescentia; rostellum lobus intermedius triangulari-lanceolatus, acutus, 1.5 mm. longus, lobi laterales cum anthera adnati, 1 cm. longi.

BELGIAN CONGO: Lualaba District, Kando, 60 miles W. of Jadotville, March 23rd–April 4th 1931, *De Witte 195* (TYPE in Herb. Brussels).

I have placed the species described above in sect. *Multipartitae*, since it agrees with this section in the general habit, the large flowers, the veining of the sepals, the character of the petals and the long slender anther canals, as well as in the broad horseshoe-shaped anther connec-

tive. On the other hand, the side lobes of the lip are quite entire and in this respect differ from all other species of the section. Furthermore, the stigmas, instead of being adnate to the lower side of the rostellar arms, are quite free from the base and in general structure resemble these organs in other sections of the genus. The anther connective, though very broad, is comparatively tall, agreeing in this feature with *H. egregia* Summerh., but the loculi are almost horizontal in position.

It is evident that in *E. falciloba* we have a very aberrant species which may eventually have to be placed in a distinct section of the genus.

Habenaria (§ **Diphyllae**) **Keayi** *Summerhayes* sp. nov. affinis *H. pilosae* Schltr., a qua statura majore, folio majore ovato vel late ovato apice acutiore, inflorescentia 13–30-flora, petali partitione postica prope basin dente instructa, labelli calcari brevioris \pm recurvato, anthera distincte apiculata, staminodiis majoribus, brachiis stigmatiferis lateraliter compressis satis distincta.

Herba terrestris, 40–50 cm. alta; tubera ellipsoidea vel cylindrico-ellipsoidea, 1.5–4 cm. longa, 5–15 mm. diametro, breviter tomentosa; radices flexuosae, 1.5–2 mm. diametro, tomentosae. *Folium* singulum vel rarius unum multo minus additum, basale, humistratum, ovatum, vel late ovatum, leviter angulatum, apice acutum, basi cordatum \pm amplexicaule, 8.5–9.5 cm. longum, 6.5–11 cm. latum, supra pilis longiusculis albis sparse indutum, subtus glabrum, marginibus dense ciliatis, pallide viride fusco-viridi-lineatum. *Scapus* erectus, teres, basi usque ad 4 mm. diametro, cataphyllis numerosis lanceolatis vel lineari-lanceolatis acuminatis \pm adpressis infirma rarius foliacea lanceolata usque ad 3 cm. longa instructus, pilis debilibus albidis \pm dense indutus; racemus 12–19 cm. longus, 3–4 cm. diametro, laxiuscule 13–30-florus;

bracteae lanceolatae, acuminatae, pilosae, ovario pedicellato breviores. *Flores* erecto-patentes, pallide virides; pedicellus cum ovario 10–12 mm. longus, dense pilosus. *Sepalum* intermedium erectum, elliptico-ovatum, apice obtusum vel fere rotundatum, circiter 7 mm. longum et 4 mm. latum, valde convexum; sepala lateralia deflexa, oblique et leviter curvatim oblongo-lanceolata, apice subrotundata, 7.5–8 mm. longa, circiter 3.25 mm. lata; omnia sepala trinervia, dorso leviter carinata et pilis patentibus longiusculis instructa. *Petala* fere ad basin bipartita, glabra; partitio postica erecta, falcatim ligulata, sepalo intermedio aequilonga, circiter 1.5 mm. lata, margine postico prope basin dente triangulari vel lineari instructa; partitio antica incurvatim vel falcatim adscendens, circiter 1 cm. longa, basi circiter 0.75 mm. lata, sursum sensim angustata, superne subcarnosa. *Labellum* profunde tripartitum; pars basalis indivisa, 1 mm. longa et 1.5 mm. lata; partitio intermedia fere recta, lineari-ligulata, apice obtusa, marginibus valde recurvatis, carnosa, 9–10 mm. longa, vix 1 mm. lata; partitiones laterales dimidio inferiore patentes, superne recurvatim adscendentes vel circinatae, subcarnosae, circiter 13 mm. longae, inferne 0.7 mm. latae, superne sensim angustatae; calcar leviter recurvatim sigmoideum, dimidio apicali clavatim inflatum, 13–14 mm. longum, 1–1.5 mm. diametro. *Anthera* erecta, 3–5.5 mm. alta, apice distincte apiculata; canales porrecti, circiter 1.5 mm. longi; staminodia breviter stipitata, oblongo-elliptica, circiter 1 mm. longa. *Brachia* stigmatifera antherae canalibus breviora, carnosa, flabellatim capitata, \pm lateraliter compressa; rostellus lobus intermedius erectus, magnus, antherae antipositus et eam aequans, elongato-triangularis, acutus, antice excavatus.

NIGERIA: Oyo Province, Ibadan Fuel Plantation, Sept. 1949, Keay Forest Herb. 25395 (TYPE).

This interesting species is clearly closely related to the more southern *H. pilosa* Schltr. which occurs in Northern Rhodesia, the Katanga Province of the Belgian Congo and the southernmost part of Tanganyika Territory. It is, however, a taller plant with larger differently shaped leaves, while there are a number of less obvious differences which are mentioned in the diagnosis. The nearest relative in West Africa is *H. Lecardii* Kraenzl., but this has a very much longer spur. The present species was described from dried and spirit specimens.

Vanilla polylepis *Summerhayes sp. nov.* a *V. imperiali* Kraenzl. foliis minoribus, bracteis vix 1 cm. longis, floribus minoribus, labelli disco squamis \pm retrorsis fimbriatis instructo satis distinguenda.

Herba alte scandens vel repens, succulenta, foliosa, glaberrima; caules flexuosi, carnosii, usque ad 6 m. longi vel ultra, usque ad 2 cm. diametro, ramosi, laxe foliati, \pm longitudinaliter plurisulcati, e nodis radicanter. *Folia* oblanceolata, elliptico-lanceolata vel oblongo-lanceolata, rarius elliptica vel oblongo-elliptica, saepius \pm curvata, basi \pm rotundata, conduplicata et breviter petiolata vel subsessilia, apice acutata vel leviter acuminata, 6–21 cm. longa, 2.5–8 cm. lata; petiolus usque ad 5 mm. longus. *Inflorescentiae* simpliciter racemosae, ramos laterales terminantes, usque ad 7 cm. longae, dense usque ad 25–30-florae; rhachis carnosus, circiter 1 cm. diametro; bractae ovato-triangulares, acutae, subpatentes, 6–7 mm. longae. *Flores* pallide virides vel viridi-albi; pedicelli cum ovariis 4–6 cm. longi. *Sepalum* intermedium oblanceolatum, acutum, 3.5–5.25 cm. longum, 8.5–9.5 mm. latum, 9–11-nerviis; sepala lateralia leviter oblique oblanceolata, intermedio aequilonga, 9–12.5 mm. lata, 10–12-nervia; omnia sepala nervis juxta apicem convergentibus. *Petala* leviter oblique oblanceolata, acuta,

3.75–5.5 cm. longa, 10–14 mm. lata, 11–13-nervia, nervis juxta apicem vix convergentibus tribus centralibus approximatis, dorso carina humili e basi per 2.5–4.5 cm. longa in apiculo acuto terminante instructa. *Labellum* e basi angustissima superne sensim sed valde dilatatum, obovato-flabellatum, antice \pm obtuse incisum, 4.5–5.5 cm. longum, superne explanatum 3–3.5 cm. latum, cum columna per 2–2.75 cm. connatum, basi tubum angustum superne dilatatum formans, antice marginibus valde undulatis, multinervium; discus medio secus nervos tres medianos squamis numerosis retrorsis instructus; squamae anticae lineares, integrae, denticulatae vel dentatae, intermediae transversae, ovatae vel oblongae, valde pectinatae vel pectinato-incisae, posticae breviores, minus pectinatae, postremae minutae papillis similes. *Columna* fere recta, 2.75–4.25 cm. longa, semiteres, apice leviter incurvata utrinque ala recurvatim oblongo-ovata obtusa instructa; anthera quadrata antice angustata; medio longitudinaliter sulcata; rostellum deflexum, ovato-triangulare, circiter 2 mm. longum. *Fructus* immaturus carnosus, cylindricus, sursum angustatus, bisulcatus, 11–12 cm. longus, inferne 1.5 cm. diametro.

ANGOLA: Moxico District, island in river just above Lusavo Falls, in evergreen vegetation, on ground and climbing up trees, Jan. 21st 1938, *Milne-Redhead* 4265.

NORTHERN RHODESIA: Mwinilunga District, River Matonchi, above dam, in evergreen fringing forest, climbing up tree trunks and trailing on the ground, Oct. 23rd–24th 1937, *Milne-Redhead* 2930 (TYPE). "Stem and leaves deep green; one flower only out at time in any inflorescence; sepals and petals greenish white; lip in front white, in throat sulphur-yellow; column whitish; very faint mauve lines just in front on channel inside lip; flowers when fading scented of vanilla." Mkusi District, Chiwefwe, 60 miles E.N.E. of Kapiri Mposhi, 1200 m. alt., probably from evergreen fringing bush, Nov. 1934, *Trapnell* 1653. "A very tall succulent liane; flowers greenish." Abercorn District, Upper Lonzula River falls, 1650 m. alt., in evergreen riverain forest, locally common, May 28th 1936, *Burt* 6338 "A dark green succulent climber ascending to 6 m."

BELGIAN CONGO: Katanga District, Elisabethville, 1440 m. alt., Nov. 22nd 1911, *Rogers 10148*. Same locality, in thick woods near water, Sept. 1923, *Von Hirschberg 28*. "Sepals and petals pale green; lip snowy white shaded with orange to pale yellow, two mauve lines from base to edge."

This is apparently not an uncommon plant in the fringing forests along the rivers and streams in a wide area from eastern Angola to the Abercorn district of Northern Rhodesia. As in its nearest ally, *V. imperialis* Kraenzl., the lip and column, which are united nearly to the top of the latter, form a trumpet-shaped tube which is very narrow at the base and widens gradually upwards. The sides of the lip are folded over the apex of the column, but the lip is not distinctly lobed though there may be a sinus of varying depth in the centre of the apex. The scales forming the central crest are very variable in character, the front ones being long and narrow, entire or more or less toothed, and resembling those forming the crest of *V. imperialis*. The central ones, however, are broad and transversely placed, usually long-pectinate or incised all around, but showing some approach to the simpler scales in *V. africana* Lindl., *V. ramosa* Rolfe and similar species. Farther back the scales are shorter but still pectinate or with long irregular teeth, while in the lower part the outgrowths consist entirely of short papillae-like hairs. The specific epithet is given in allusion to this assemblage of scale-like outgrowths.

Malaxis (§ **Katochilos**) **katangensis** *Summerhayes sp. nov.* affinis *M. pygmaeae* Summerh., a qua statura majore, foliis plus duplo majoribus, sepalis univerviis, labello ambitu quadrato basi angustato distinguenda.

Herba terrestris, 9–12 cm. alta; tubera ellipsoidea, circiter 1 cm. longa et 5 mm. diametro. *Caulis* brevis,

erectus, 1–2 cm. altus, basi radices flexuosas graciles tomentosas emittens, superne cataphyllis paucis laxe vaginantibus apice \pm recurvatis acutis omnino vestitus, apice 2–3-foliatus. *Folia* patentia vel leviter recurvata, fere humistrata, sessilia, late ovata vel elliptico-ovata, basi caulem amplectentia, apice subacuta vel obtusa, 2.5–5 cm. longa, 1.75–3 cm. lata, siccitate textura tenuiter papyracea, plurinervia. *Inflorescentia* erecta, 8–10 cm. longa, superne subdense multiflora; pedunculus 5–6 cm. longus, gracilis, inferne fere teres, superne pluri-angulatus et angustissime alatus, cataphyllis 3–5 dissitis lanceolatis acuminatis 3–4 mm. longis instructus; rhachis pluri-angulata; bracteae adpressae, lanceolato-ovatae, valde acuminatae, 2.5–3.5 mm. longae, 1.5–2.25 mm. latae, uninerviae. *Flores* pro sectione parvi, rhachidi \pm adpressi, virides, \pm hyalini; pedicellus cum ovario 2–2.5 mm. longus. *Sepalum* intermedium erectum, elliptico-lanceolatum, basi \pm rotundatum, apice subacutum vel obtusum, 2–2.5 mm. longum, 1–1.25 mm. latum; sepala lateralia libera, incurvatim deflexa, oblique ovato-lanceolata, apice fere acuta, 1.75–2.25 mm. longa, 1.2–1.5 mm. lata. *Petala* patentia, leviter recurvata, lanceolato-ligulata, apice obtusa, inferne leviter ampliata, 1.75–2.25 mm. longa, 0.3–0.6 mm. lata, marginibus integris vel brevissime papilloso-ciliolatis; omnia tepala uninervia. *Labellum* inferum, sessile, ambitu \pm quadratum, antice rotundatum leviter emarginatum, basin versus sensim angustatum, basi auriculis semiovatis 0.25–0.45 mm. longis columnam amplectentibus instructum, in toto (auriculis inclusis) 1.75–2.25 mm. longum, 1.6–1.75 mm. latum, 5-nervium, basi tuberculis duobus humilibus, medio pulvino dense puberulento quadrato instructum. *Columna* incurvata, 0.7 mm. longa; anthera hemisphaerica; rostellum truncatum.

BELGIAN CONGO: Katanga Province, Noots Farm, near Elisabeth-

ville, close to roots of large shady trees, very abundant, December 9th 1923, *C. W. von Hirschberg 152* (TYPE); Kisenga Valley, groups of 20–100 plants growing at foot of large trees, Dec. 27th 1924, *Von Hirschberg 152* (Herb. Bruxell.); Kantu, by water, Jan. 26th 1908, *Kassner 2401*.

This species is very similar to *M. pygmaea* Summerh. in floral structure and general growth, but is a much larger plant with larger leaves and minor differences in the flower structure as indicated in the diagnosis. From most other species of section *Katochilos*, it may be distinguished by the very short stem, the leaves thus appearing almost on the ground. It appears to be decidedly local in occurrence, though it may be very abundant where it does occur.

Malaxis (§ Katochilos) pygmaea *Summerhayes* *sp. nov.* inter species sectionis statura nana, cauli brevissimo, foliis et floribus parvis, labelli basi bituberculata facile distinguenda.

Herba terrestris, pusilla, usque ad 5 cm. alta; tubera 1–3, ovoidea vel ellipsoidea, 6–10 mm. longa, 3–5 mm. diametro, alba, cataphyllorum cicatricibus annulatis notata; caulis erectus, 1–1.5 cm. longus, 1.5–2 mm. diametro, maxima pro parte subterraneus, cataphyllis pluribus ± omnino vestitus, apice 2–3-foliatus. *Folia* patentia, fere humistrata, sessilia, late ovata vel elliptico-ovata, basi caulem amplectentia, apice acuta apiculato-acuminata, 7–20 mm. longa, 6–17 mm. lata, plicata, pluri-nervia. *Inflorescentia* erecta, leviter flexuosa vel curvata, 1–4 cm. longa, superne dense multiflora; pedunculus usque ad 2 cm. longus, teres vel obscure angulatus, gracilis, cataphyllis paucis late lanceolatis caudato-acuminatis usque ad 3.5 mm. longis instructus; rhachis angulata; bracteae ± adpressae, lanceolato-ovatae, longe acuminatae, usque ad 2.5 mm. longae, uninerviae. *Flores* pro sectione parvi, suberecti, rhachidi ± adpressi, flavo-virides;

pedicellus cum ovario circiter 2 mm. longus. *Sepalum* intermedium erectum, ovato-oblongum, basi \pm rotundatum, apice obtusum vel subrotundatum, 1.75–2 mm. longum, circiter 1 mm. latum, 2–3-nervium; sepala lateralia deflexa, incurvatim oblique ovata, apice subrotundata, 1.25–1.5 mm. longa, vix 1 mm. lata, 2- vel subtrinervia. *Petala* patentia vel \pm recurvata, leviter oblique anguste ligulata, apice obtusa, 1.25–1.5 mm. longa, circiter 0.3 mm. lata, marginibus apice et basi exceptis papillato-ciliolatis, uninervia. *Labellum* inferum (vel anticum), sessile, ambitu ellipticum vel elliptico-quadratum, basi in auriculas rotundatas columnam \pm amplectentes decurrens, in toto (auriculis inclusis) circiter 1.75 mm. longum, medio circiter 1.5 mm. latum, marginibus undulatis, apice rotundatum leviter emarginatum, 5-nervium, basi tuberculis vel callis humilibus orbicularibus medio pulvino puberulento trapeziformi instructum. *Columna* brevis, porrecta, subteres, apice truncata, circiter 0.35 mm. alta; anthera hemisphaerica; fovea stigmatica elliptica; rostellum truncatum.

NORTHERN RHODESIA: Mwinilunga District, just north of Mwinilunga on shallow soil overlying laterite in *Brachystegia-Isoberlinia* woodland, Jan. 26th 1938, *Milne-Redhead 4359* (TYPE) "Tubers white, ringed; leaves green, plicate; flowers yellow-green."

The species is described from over 25 specimens dried or in liquid preservative. *M. pygmaea*, as the name suggests, is the smallest species of the genus found so far in Africa, reaching at the maximum a height of 5 cm. and being usually much smaller. Another striking feature is the very short stem, most of which is below the surface of the ground, the leaves consequently being practically at ground level.

The species in general floral structure belongs clearly to the section *Katochilos* Schltr. in which the lip is anterior in position. This section includes six other species in Tropical Africa and one in Madagascar.

Malaxis Hirschbergii *Summerhayes sp. nov.* affinis *M. Maclaudii* (Finet) Summerh., a qua floribus majoribus, labelli marginibus basalibus incrassatis valde prominentibus, labelli dimidio antico subito dilatato satis distincta.

Herba terrestris, 10–15 cm. (fide collectoris 25 cm.) alta, glaberrima; tubera non visa. *Caulis* erectus, circiter 5 cm. altus vel ultra, basi radices graciles flexuosas emittens, superne cataphyllis 3–4 inferne vaginantibus apice subfoliaceis liberis acutis vestitus, apice 2–3-foliatus. *Folia* ± patentia, 1–2 cm. petiolata, lanceolata vel elliptico-lanceolata, apice acuta, in toto 3–7 cm. longa, 1.5–3.3 cm. lata, siccitate molliter papyracea, 5-nervia. *Infloréscentia* erecta, circiter 7–8 cm. longa, apice dense multiflora; pedunculus 5–7 cm. longus, basi fere teres, superne anguste bialatus, cataphyllis circiter 3 dissitis lanceolatis valde vel caudato-acuminatis 6–8 mm. longis instructus; rhachis brevis, fere 1 cm. longa; bracteae lanceolatae, acuminatae, usque ad 6 mm. longae, ovario pedicellato breviores. *Flores* erecto-patentes, pseudo-umbellati, pallide rubro-purpurei; pedicellus cum ovario usque ad 13 mm. longus. *Sepalum* intermedium oblongo-lanceolatum, acutum, 5.5–5.75 mm. longum, 2–2.5 mm. latum; sepala lateralia libera, oblique lanceolato-oblonga, subacuta, 5 mm. longa, 2–2.4 mm. lata. *Petala* elliptico-lanceolata, apice acuta, 4.5–4.8 mm. longa, 1.75–2.25 mm. lata, marginibus ciliolatis; omnia tepala trinervia. *Labellum* inferum, sessile, ambitu late flabellatum, dimidio basali marginibus incrassatis, in toto 4–4.5 mm. longum, antice 4.7–4.9 mm. latum, dimidio apicali subito dilatatum, transverse ellipticum, marginibus breviter laceratis, basi callis duobus ligulatis humilibus parallelis antice sensim dilatatis, callo dentiformi porrecto vel recurvato anteposito instructum, medio nervis tribus parallelis utrinque nervo arcuato apice convergenti extus

ramoso instructum. *Columna* leviter incurvata, 1.5–1.75 mm. longa, semiteres; anthera semiellipsoidea, 0.5–0.6 mm. longa; rostellum ligulatum, anguste truncatum.

BELGIAN CONGO: Katanga Province, Kinsenga River, near Elisabethville, in wet dark places at river's edge under trees, only found in this locality, Nov. 30th 1923, *C. W. von Hirschberg 111* (TYPE; ISOTYPE in Herb. Brussels).

This is clearly an ally of *M. Maclaudii* (Finet) Summerh. and *M. Chevalieri* Summerh., both of which are found in the general region stretching from French Guinea to the Sudan along the north side of the Equatorial Forest belt. These are all characterised by the very short apparently umbellate raceme, the relatively broad fan-shaped lip and the tepals all more or less similar to one another. The present species may be distinguished most readily by the great development of the thickened margin of the lower part of the lip which in this species extends for half the total length; above this thickened margin the lip suddenly widens to form a thin transversely elliptical portion which is shortly lacerate all round. In *M. Maclaudii* the basal thickened portion is very poorly developed, while *M. Chevalieri* lacks the central projecting tooth-like callus.

Liparis odontochilos *Summerhayes sp. nov.* affinis *L. Deistelii* Schltr., sed labello medio subito dilatato marginibus lateralibus grosse dentatis differt.

Herba terrestris vel epiphytica, usque ad 13 cm. alta. *Caulis* primarius repens, gracilis, teres, 1–2 mm. diametro, cataphyllis arcte vaginantibus obtusis \pm obtectus, radices flexuosas hic illic emittens; *caulis* secundarius erectus, basi valde incrassatus, carnosus, pseudobulbum anguste conicum formans, sursum sensim angustatus, inferne cataphyllis subfoliaceis acutis vestitus, superne 3–4-foliatus, usque ad 5 cm. altus. *Folia* lanceolata vel

elliptico-lanceolata, acuta, basi in vaginam angustata sed vix petiolata, usque ad 8 cm. longa et 2.5 cm. lata, plicata, textura tenuia, marginibus leviter undulatis. *Infloréscentia* recta vel leviter curvata, usque ad 8 cm. longa, superne sublaxe 2-10-flora; pedunculus teres, angustissime alatus, 2-5 cm. longus, cataphyllis paucis lanceolatis acutis instructus vel nudus; rhachis angulata vel anguste alata; bracteae erecto-patentes, lanceolatae, acutae, usque ad 8 mm. longae. *Flores* erecto-patentes, virides vel purpureo-striati vel purpureo-tincti; pedicellus cum ovario circiter 8 mm. longus, gracilis. *Sepalum* intermedium recurvatum, lanceolato-ligulatum, apice acutum, basi auriculatum \pm amplexicaule, 4.5-8.75 mm. longum, medio 1.25-2 mm. latum; sepala lateralia primo fere ad apicem connata, synsepalum orbiculari-obovatum, apice rotundatum, totum 3.5-6.25 mm. longum, 3.25-6.4 mm. latum formantia, demum \pm libera; omnia sepala trinervia. *Petala* deflexa, linearia, apice obtusa, basi cum sepalis adnata dilatata, 5-10 mm. longa, 0.35-1 mm. lata, uni- vel subbinervia. *Labellum* e basi angusta breviter auriculata subito dilatatum, subflabellatim transverse oblongum, antice truncatum, late emarginatum cum apiculo interjecto, marginibus lateralibus grosse denticatis, 3-6.5 mm. longum, 4-7.5 mm. latum, basi callo transverso obtuse bidentato instructum. *Columna* incurvata, semiteres, apice dilatata, late alata, 2.3-5 mm. longa; anthera cucullata, antice emarginata.

BELGIAN CONGO: Ruwenzori, Lanuri, 1700-1800 m. alt., on a rotten trunk in the shade, June 1st 1914, *Bequaert 4629*.

UGANDA: Kigezi, impenetrable forest, creeping in moss on shady bank in forest, Nov. 1948, *Eggeling 5851*.

KENYA COLONY: East Aberdare Mountains, *Ocotea* forest, in moss on tree-fern stems, *Dale 1860* (TYPE); same locality, Thiririki River, Nov. 1937, *Cunningham-van Someren 21*.

TANGANYIKA TERRITORY: Lossogonoi, S. by W. of Moshi, summit of mountain, 2090 m. alt., in leaf mould on rocky ledge, coll. H.F.I. Elliott, cult. and flowered Amani, May 20th 1944, *Moreau 770*.

This small creeping species is clearly related to *L. Deistelii* Schltr. which also occurs in East Africa. It may be distinguished by the lip being suddenly broadened in the front part with the outer margins very coarsely toothed. The basal callus is more clearly transverse, with two lateral rounded knob-like teeth.

Bulbophyllum encephalodes *Summerhayes sp. nov.* affine *B. oreonasti* Rehb.f. et *B. unifoliato* De Wildem., ab illo pseudobulbis unifoliatis, pedunculo quam rhachide duplo longiore, ab hoc pseudobulbis quadrangularibus, foliis latioribus, floribus majoribus \pm atrorubris nec flavis, ab utroque labelli dimidio apicali rimis complicatis sinuosis verrucisque ita instructo ut cerebrum simulet satis differt.

Herba epiphytica, glaberrima. *Rhizoma* repens, usque ad 35 cm. longum, 2–3.5 mm. diametro, primo vaginis scariosis 5–7 mm. longis, 5–12 mm. distantibus instructum, sub pseudobulbis radices caespitosas flexuosas ramosas tenues griseas emittens. *Pseudobulbi* 1.5–8 (saepius 4–6) cm. distantes, elliptico-oblongi vel conico-elliptici, \pm compressi, acute tetragoni, apice \pm truncati, monophylli. *Folia* oblonga, elliptico-oblonga vel elliptica, basi conduplicata, in petiolum brevissimum angustata, apice rotundata, 3–12 cm. longa, 1.2–3.2 cm. lata, subcarnosa, coriacea, supra leviter canaliculata. *Scapus* erectus, racemo \pm recurvato vel dependente, 13–26 cm. altus; pedunculus rectus vel \pm leviter curvatus, teres, 11–24 cm. longus, 1–2 mm. diametro, vaginis 4–7 arctissimis, obtusis, distantibus, 5–13 mm. longis instructus; rhachis valde compressa, 2–7 cm. longa, 3 mm. lata, marginibus leviter sinuatis, dense multiflora. *Flores* distichi, e rhachidis marginibus alternatim exorientes, sessiles, rubro-virides vel \pm atrorubri; bracteae patentis vel leviter recurvatae, rigidae, ovatae vel lanceolato-ovatae, acuminatae, 2.5–5

mm. longae, scariosae. *Sepalum* intermedium lanceolato-ovatum, acuminatum, 4–5 mm. longum, 2.5–3.25 mm. latum, valde convexum, \pm incurvatum; sepala lateralia oblique lanceolato-ovata, longiuscule subulato-acuminata, 4.5–5.25 mm. longa, basi 2.25–3 mm. lata, mento brevi 0.75–1 mm. longo; omnia sepala trinervia. *Petala* lanceolato-vel elliptico-oblonga, acuta, 2.5–3 mm. longa, 0.6–1 mm. lata, uninervia. *Labellum* valde carnosum, ambitu ovoideo-ellipsoideum, leviter curvatum, totum 2.5–3 mm. longum, 1.5–1.75 mm. latum, inferne carinis humilibus \pm parallelis, medio praesertim subtus rimis complicatis sinuosis reticulatis \pm transversis, apice verrucis numerosis irregularibus instructum. *Columna* brevis, semi-teres, 2 mm. alta, stelidiis brevibus acutis, androclinio leviter excavato; anthera \pm hemisphaerica, leviter retusa; ovarium crassum, 2–3 mm. longum, teres, leviter plurisulcatum. *Capsulae* ellipsoideae, 7 mm. longae, 4–5 mm. diametro.

UGANDA: Ankole, Kalinzu Forest, Aug. 1936, *Eggeling 3196*; “Epiphyte, flowers greenish with purple spots and claret centre.”

KENYA COLONY: Kericho District, Dec. 1933, *Gray 3*; Kakamega Forest, 1500 m. alt., bank of river in bush country, Oct. 1939, *Tweedie 492*; “Epiphyte, flowers plum-coloured with darker streaks.”

TANGANYIKA TERRITORY: East Usambara Mts., Bomole, near Amani, 1050 m. alt., growing on quinine and other trees in comparatively dry situations, Nov. 29th 1940, *Moreau 6* (TYPE); “Tepals mainly green, edged with maroon, upper side of labellum dark maroon.” Between Amani and Monga, 900 m. alt., epiphytic in topmost branches of evergreen rain-forest of *Cephalosphaera*, *Tylostemon kuao* and *Parinari holstii*, Nov. 18th 1936, *Greenway 4742*; “Flowers greenish crimson.”

BELGIAN CONGO: Katanga, near Elisabethville, on trees near stream, July 31st 1930, *Hutchinson 4122*; “Flowers deep crimson.” Lubunbashi, epiphytic in gallery forest, Nov. 1927, *Quarré 908*; Katanga, no locality, epiphyte in forest plantation, Feb. 1935, *Quarré 4454*.

NORTHERN RHODESIA: Mwinilunga District, River Mwanamitawa, about 12 miles west of River Lunga, epiphytic on tree trunk in *Cryptosepalum* woodland, Aug. 22nd 1930, *Milne-Redhead 945*; “Flowers reddish-purple, lip dark purplish-black, column pinkish, anther white.” Same district, slope east of River Matonchi and by river, on trees in

Brachystegia woodland and also in evergreen vegetation, flowered May 16th 1938, *Milne-Redhead 4375*; "Sepals green, mottled maroon, petals greenish-yellow, edged maroon, lip white, side lobes maroon, anther lemon-yellow."

This is clearly a widely spread species, mainly in savanna vegetation but also in rain-forest. Its affinities and characteristic features are set out in the diagnosis. The frequently more or less reflexed or almost pendulous raceme is an interesting character. The lip is a truly remarkable structure which is very difficult to describe. It is very fleshy, more or less ellipsoidal, and somewhat curved especially in the lower part. Here there are two low parallel keels which run forward for about two-thirds of the lip becoming lower and more undulate or sinuous towards their apices. The body of the lip is smooth at the base, but in the centre the surface becomes increasingly broken up by very curved sinuous fissures forming a coarse and irregular reticulation. In the apical third this fissuring becomes so pronounced as to produce a series of large irregular warts covering the whole surface. The general effect is reminiscent of a brain, hence the specific epithet. These irregularities are well shown in several gatherings in liquid preservative and are not due to drying.

Bulbophyllum porphyrostachys *Summerhayes* *sp. nov.* affine *B. lupulino* Lindl. a quo rhachide medio anguste nuda, bracteis purpureis apice breviter incurvatis, labello magis carnosio alis angustissimis apice verrucoso facile distinguendum.

Herba epiphytica, glabra; rhizoma repens, teres, 2–3 mm. diametro, basi pseudobulborum radices numerosas flexuosas ramosas emittens. *Pseudobulbi* 2.5–4 cm. distantes, erecti, saepius 4-angulati, ellipsoidei vel oblongo-ellipsoidei, 2–4 cm. longi, 1.5–2 cm. diametro, basi cataphyllis paucis, scariosis apiculatis \pm vestiti, apice diphylli.

Folia erecto-patentia, e petiolo brevi ligulata vel oblan-
ceolato-ligulata, apice rotundata vel apiculata, 8–13 cm.
longa, supra medium 1.3–2.3 cm. lata, saturate viridia,
supra nitentia, secus medium leviter canaliculata, subtus
leviter carinata. *Scapus* e basi pseudobulbi ortus, rectus
vel leviter curvatus, folia aequans vel brevior, usque ad
15 cm. altus; pedunculus 4–6 cm. longus, teres, viridis,
cataphyllis 5–8, laxe ochreatis, acutis, 7–10 mm. longis
fere omnino vestitus; rhachis anceps, leviter fractiflexa,
5–10 cm. longa, 2.5–3 mm. lata, viridis; bracteae disti-
chae, patentēs, imbricatae, ovato-cymbiformes sed valde
lateraliter compressae, apice leviter incurvatae, 9–13 mm.
longae, 5–6 mm. latae, fusco-purpureae, glabrae. *Flores*
sessiles, quam bracteae multo breviores, purpurei vel
virides purpureo-maculati, semiclausi. *Sepalum* interme-
dium incurvatum, valde concavum, triangulari-ovatum,
apice acutum, apiculatum leviter cucullatum, circiter 4
mm. longum, 1.8–2 mm. latum; sepala lateralia oblique
ovata, apice falcitim decurvata, acuminata, fere 4 mm.
longa, circiter 2.5 mm. lata; omnia sepala subcarnosa,
viridia, intus purpureo-notata. *Petala* linearia, leviter
falcitim curvata, apice obtusa vel subacuta, 2.3 mm.
longa, 0.3 mm. lata, viridia vel purpurea. *Labellum* valde
carnosum, sectione semiteres, ambitu ellipticum, supra
leviter excavatum, medio canaliculatum, subtus valde
convexum, utrinque ala angustissima denticulata instruc-
tum, apice verrucosum, circiter 2 mm. longum, 1.6–1.7
mm. latum, saturate purpureum. *Columna* semiteres,
2.3 mm. alta, superne anguste alata, stelidiis ovatis acutis
antheram aequantibus; anthera cucullata, ambitu ellip-
tica, antice breviter producta; fovea stigmatica quadrata,
antice labio prominente instructa; ovarium crassum, vix
angulatum, deorsum angustatum, 2 mm. longum.

NIGERIA: Benin Prov., Okomu Forest Reserve, near Nikrowa, in
high forest on crown branches of fallen *Corynanthe*, Dec. 1947, cult.

and flowered Ibadan, Oct. 1948, *Keay in Forest Herbarium 22711* (TYPE); Benin Prov., Sapoba Forest Reserve, in broken high forest, on crown branches of large *Irvingia gabunensis*, Oct. 28th 1946, *Keay & Onochie in Forest Herbarium 21590*.

This very striking species is clearly closely related to *B. lupulinum* Lindl., possessing similar large spreading imbricating bracts and a very similar flower structure. It may, however, be easily distinguished by the different shape of the quite glabrous purple or crimson bracts, which here have a slightly incurved apex and consequently a slight dip in the upper margin. In *B. lupulinum* the upper margin is either almost straight or evenly convex all along, while the bracts are fawn coloured and dotted all over with small furfuraceous hairs. In our species the bases of insertion of the two rows of bracts are separated so that there is a narrow median strip of the rhachis visible nearly to the apex, whereas in *B. lupulinum* the bases of the bracts often overlap in a vertical direction so that the rhachis is only visible on elongation. The lip in *B. porphyrostachys* is extremely fleshy with a rounded convex lower surface and a flat or slightly convex upper surface. At the edge of this are the very narrow toothed wings which are a little wider in front. The apex of the lip is furnished with a number of small warty excrescences.

Triceratorhynchus *Summerhayes gen. nov.*

Epiphytica. *Caulis* brevissimus, plurifoliatus. *Folia* linearia, apice vix bilobulata. *Inflorescentiae* patentes, elongatae, pluriflorae. *Flores* parvi, pedicellati. *Sepala* et *petala* libera, inter se similia, patentia, anguste lanceolata. *Labellum* calcaratum, simplex, concavum, lanceolatum, ecallosum, tepalis aequilongum; calcar gracile, ex ore angusto cylindricum, labelli laminam superans vel aequans. *Columna* brevis, crassa, apice truncata; androclinium leviter excavatum, dorsum versus reclinatum;

anthera postice hemisphaerica, antice in appendicem triangularem obtusam eroso-ciliatam producta; pollinia 2, ellipsoidea, stipitibus duobus brevibus paulo supra medium viscidiorum exorientibus, viscidiiis duobus distinctis elliptico-ligulatis, stipitibus multo longioribus; rostellum utroque productum, viscidiiis amotis utroque trifurcatum, sursum lobis lateralibus quam intermedio satis longioribus, deorsum lobis lateralibus triangulari-dentatis lobo intermedio fere subulato longiore; fovea stigmatica quadrata vel fere orbicularis.

Species unica: *T. viridiflorus* Summerh.

This plant, which looks rather like an *Angraecopsis* or small *Angraecum*, is chiefly characterised by the remarkable structure of the rostellum. This is attached to the apex of the column and is produced both upwards and downwards from the point of attachment to form a roughly ovate shield-like plate. On removal of the two elongated viscidia the rostellum is left trifurcate in both directions, the upward prolongations being longer than those downwards. The general effect is to produce a tridentlike or 3-horned structure in both directions. The two vertical erect lateral lobes are somewhat incurved and nearly twice as long as the narrower very acute central lobe; on the other hand, the downwardly produced middle lobe, which is very similar to the upward one, is considerably longer than the quite short lateral lobes.

Another interesting feature is in the anther which is produced in front into a broadly triangular beak which is erose-ciliate all around the front margins.

The genus is perhaps most closely allied to *Sphyrarhynchus* Mansf. which has a short column with the broad rostellum produced both upwards and downwards to form a hammer-head like structure. In the latter genus, however, there is only a single viscidium and on removal of this the rostellum is obtusely bilobed or almost entire.

Both genera are small plants with few-flowered racemes and relatively small leaves, though in *Sphyrarhynchus* these are much broader than in the present genus.

Triceratorhynchus viridiflorus *Summerhayes* sp.
nov.

Planta pusilla, epiphytica; caulis brevissimus, circiter 5 mm. longus, 3–5-foliatus, radices numerosas flexuosas emittens. *Folia* suberecta vel \pm reflexa, linearia, saepius \pm curvata, apice obscure inaequaliter bilobulata vel integra, acuta, lobulo brevior dentiformi, lobulo longiore usque ad 1.5 mm. longo, tota 1–5 cm. longa, 1–3.5 mm. lata, supra \pm concava, carnosula. *Inflorescentiae* ex axillis foliorum exortae, patentes vel horizontales, paucivel pluriflorae, usque ad 6 cm. longae; pedunculus usque ad 2 cm. longus, gracilis, teres, vaginis paucis acutis brevibus instructus; rhachis pedunculo similis; bractee breviter ochreate, late ovatae, acutae, 1–1.5 mm. longae. *Flores* usque ad 9, 4–6 mm. distantes, patentes, virides ad flavi; pedicellus cum ovario 4–5 mm. longus, saepius medio \pm geniculatus. *Sepalum* intermedium lineari-lanceolatum, acutum, 4.25–5.5 mm. longum, 0.75–1.25 mm. latum, trinervium; sepala lateralia oblique lanceolato-ligulata, leviter curvata, subacuta, 5.25–6.25 mm. longa, 0.9–1.2 mm. lata, tri- vel subquadrinervia. *Petala* curvatim lineari-lanceolata, acuta, 4.25–5.25 mm. longa, vix 1 mm. lata, trinervia; omnia tepala patentia vel \pm recurvata. *Labellum* valde concavum, ambitu late lanceolatum, acutum, medio obscure trilobatum, lobis lateralibus erectis brevissimis rotundatis, lobo intermedio superne incrassato recurvato, totum 4.75–5.5 mm. longum, explanatum circiter 3.5 mm. latum, plurinervium; calcar ex ore angusto cylindricum, leviter incurvatum, apice obtusum, 5.5–8 mm. longum. *Columna* generis, circiter 0.75 mm. longa; anthera circiter 1 mm. longa;

pollinia 0.25–0.5 mm. longa, stipitibus \pm geniculatim decurvatis apice subspathulato-dilatatis 0.2 mm. longis, viscidii ligulatis utroque rotundatis marginibus hyalinis 0.7 mm. longis; rostellum viscidii amotis sursum trifurcatum, lobis lateralibus leviter convergentibus cornibus similibus circiter 0.5 mm. longis, lobo intermedio triangulari-subulato quam lateralibus satis brevior, deorsum breviter trifurcatum, lobis lateralibus brevibus triangularibus acutis, lobo intermedio fere duplo longiore subulato-lineari, circiter 1.5 mm. longo.

UGANDA: Bunyoro, Budongo Forest, June 1935, *Eggeling 2058*; same locality, epiphytic on *Olea Welwitschii*, cult. and flowered Busingiro, June–July 1944, *Eggeling 5492* (TYPE).

KENYA COLONY: Kakemega Forest, 1500 m. alt., June 1944, E.W. Carroll; comm. *E.M. Tweedie 648*.

This plant is probably generally distributed in the forests of this region, but it is easily overlooked on account of its small size and inconspicuous green flowers.

Eggelingia *Summerhayes gen. nov.*

Epiphytica. *Caulis* monopodialis, elongatus, basi radicans, superne laxe foliatus. *Folia* ligulata, apice bilobulata. *Inflorescentiae* ex axillis foliorum ortae, brevissimae, pauciflorae. *Flores* parvi, pedicellati. *Sepala* libera, \pm patentia, lanceolata vel oblonga, aequalia. *Petala* oblonga, quam sepala paulo minora. *Labellum* calcaratum, simplex, ovatum, acutum, ecallosum, sepalis aequilongum; calcar fere rectum, ore pro rata angustum, cylindricum, prope apicem paulo dilatatum, labelli laminae aequilongum. *Columna* brevis, crassa, apice truncata, semiteres; androclinium leviter excavatum; anthera hemisphaerica, antice in appendicem acutam producta; pollinia 2, ovoidea vel subpyriformi-ovoidea, stipite ligulato apice truncato dilatato \pm incurvato, viscidio rectangulari-elliptico stipite paulo brevior, rostellum de-

flexim porrectum, triangulare, viscidio amoto profunde bifidum; fovea stigmatica rectangularis.

Species duae, Africae tropicae incolae.

Species typica: *E. ligulifolia* Summerh.

This small genus resembles very closely some species of *Tridactyle* and, in vegetative characters, certain species of *Angraecum*, all having rather long straggling stems with spreading ligulate leaves. The very short inflorescences are also very reminiscent of *Tridactyle* such as *T. anthomaniaca* (Rchb.f.) Summerh. and *T. Scottellii* (Rendle) Schltr., especially those species in which the lip is almost entire. *Eggelingia* differs, however, in the quite entire lip, which lacks the thickened basal auricles so characteristic of *Tridactyle*, and in the very large rectangular viscidium, which is nearly as long as the stipes and longer than the pollinia. The genus is best placed next to *Tridactyle*.

The genus is distributed from the Gold Coast in the west to the forests of western Uganda in East Africa, being widely spread in the forests of the eastern Congo Basin. It is named in honour of Dr. W. J. Eggeling who has done so much towards increasing our knowledge of the epiphytic orchids of Uganda.

***Eggelingia ligulifolia* Summerhayes sp. nov.**

Planta epiphytica vel rarius saxicola. *Caules* saepius singuli, pauciramosi, saepius \pm penduli vel e basi descendente sursum arcuati, graciles, usque ad 45 cm. longi, 2–3 mm. diametro, basi vel inferne radices griseas flexuosas emittentes, foliorum delapsorum vaginis omnino vestiti, superne laxiuscule foliati. *Folia* circiter 1 cm. distantia; vagina arcta, leviter transverse rugulosa, siccitate longitudinaliter costulata, internodium aequans vel paulo longior, apice laminae opposita ligula subulata usque ad 7 mm. longa instructa; lamina sessilis, \pm patens

vel rarius recurvata, ligulata vel lineari-ligulata, apice inaequaliter bilobulata vel subacuta, lobulo longiore usque ad 6 mm. longo, supra secus medium canaliculata, subcarnosa, 2–7 cm. longa, 5–8 mm. lata. *Inflorescentiae* ex axillis foliorum ortae, brevissimae, 2–3-florae; pedunculus fere nullus; rhachis fractiflexa, usque ad 3 mm. longa; bracteae triangulares, acutae, pedicello cum ovario duplo breviores. *Flores* albi; pedicellus cum ovario 4.75–6.75 mm. longus. *Sepalum* intermedium late lanceolatum, acutum, 5.25–6.75 mm. longum, 2.2–2.6 mm. latum, trinervium; sepala lateralia oblique lanceolata, leviter curvata, acuta, 4.5–7.75 mm. longa, 2–2.3 mm. lata, 2-nervia. *Petala* oblonga vel oblongo-lanceolata, subacuta vel obtusa, leviter obliqua, 4.5–6 mm. longa, 1.75–2.25 mm. lata, subtrinervia. *Labellum* valde concavum, late lanceolatum vel lanceolato-ovatum, apice leviter acuminatum, 4.5–5.75 mm. longum, explanatum 2.75–3.5 mm. latum, plurinervium; calcar fere rectum, cylindricum, vix inflatum, 4–5 mm. longum. *Columna* crassa, 1.25–1.75 mm. longa, structura generis; pollinia 0.6–0.8 mm. longa; stipes 1–1.7 mm. longus; viscidium 1.3–1.4 mm. longum; ovarium leviter 6-sulcatum, pilis brevibus furfuraceis instructum.

BELGIAN CONGO: Angi, lava plains, on lava, Jan. 21st 1914, *Bequaert 5819*.

UGANDA: Kigezi, Kayonza Forest, Ishasha Gorge, cult. & flowered Busingiro, September 1944, *Eggeling 5379*; Kigezi, impenetrable forest, Nov. 1948, *Eggeling 5845*; Toro, 1500 m. alt., on trees in forest, coll. C. H. Lankester, cult. & flowered Kampala, Nov. 26th 1921, *Snowden 736*; Toro, Itwara Forest, Aug. 1943, *Eggeling 5372* (TYPE).

This species occurs in the region around the main rift valley in East Africa, between Ruwenzori and the Virunga Mountains further south. Although usually a forest plant, it also occurs on lava in the volcanic areas. This is true of a number of other orchids which are normally epiphytic.

Eggelingia clavata *Summerhayes sp. nov.* ab *E. ligulifolia* Summerh. foliis pro rata paulo latioribus, inflorescentiis usque ad 6-floris, floribus minoribus, labelli dimidio apicali clavatim inflato satis differt.

Planta epiphytica. *Caules* singuli vel caespitosi, simplices, saepius \pm penduli vel e basi descendente sursum arcuati, graciles, usque ad 35 cm. longi, 2–3 mm. diametro, basi radices flexuosas ramosas emittentes, inferne foliorum delapsorum vaginis fere omnino vestiti, superne laxiuscule foliati. *Folia* circiter 1 cm. distantia; vagina arcta, paulo anceps, leviter transverse rugulosa, internodium aequans vel paulo brevior, apice laminae opposita ligula subulata usque ad 7 mm. longa instructa; lamina sessilis, patens vel \pm recurvata, ligulata vel oblongo-ligulata, apice inaequaliter obtuseque bilobulata, lobulo longiore usque ad 6 mm. longo, supra secus medium canaliculata, subcarnosa, 2–5 cm. longa, 5–9 mm. lata. *Inflorescentiae* ex axillis foliorum ortae, brevissimae, 2–6-florae; pedunculus usque ad 3 mm. longus, cataphyllis ochreatis 1–2 ovatis obtusis instructus; rhachis fractiflexa, usque ad 3 mm. longa; bracteae e basi breviter vaginante triangulari-ovatae, subacutae, pedicello cum ovario plus duplo breviores. *Flores* albi vel flavido-albi; pedicellus cum ovario 3–4 mm. longus. *Sepalum* intermedium late lanceolatum, late oblongo- vel elliptico-lanceolatum, acutum vel obtusum, 3–3.75 mm. longum, 1.6–1.9 mm. latum, trinervium; sepala lateralia oblique lanceolata vel late lanceolata, apice acuta, 3.25–4.75 mm. longa, 1.25–1.75 mm. lata, 2–3-nervia. *Petala* oblonga vel oblongo-lanceolata, obtusa, leviter obliqua, 2.25–3.75 mm. longa, 1–1.75 mm. lata, 1–3-nervia. *Labellum* valde concavum, late lanceolatum vel ovato-lanceolatum, leviter acuminatum, 3–3.5 mm. longum, explanatum 2.25–3.25 mm. latum, plurinervium; calcar fere rectum, ore angustum, dimidio apicali clavato-inflatum, apice rotun-

datum, 2.5–4 mm. longum, 1–1.25 mm. diametro. *Columna* crassa, 0.75–1 mm. longa, structura generis; pollinia ovoidea, 0.4–0.5 mm. longa; stipes 1–1.15 mm. longus; viscidium circiter 1 mm. longum; ovarium leviter 6-sulcatum, pilis brevibus furfuraceis instructum.

GOLD COAST: Ashanti, Ofinso, Aug. 1938, *Cox* 99.

GABON: Upper Ngoumyé River, Lake Bandoungou, in forest, Dec. 30th 1924, *Le Testu* 5160 (TYPE).

BELGIAN CONGO: Between Weko and Bengamisa, N. of Stanleyville, around sources of River Ngula, July 16th 1939, *Louis* 15484; Penghe, banks of River Itur, in forest, Feb. 6th 1914, *Bequaert* 2334; Kibale District between Irumu and Mambasa, in forest, Oct. 1931, *Lebrun* 4173; no locality, 1920, *Lacomblez* 55.

This species resembles very closely *E. ligulifolia* Summerh., from which it may be distinguished by the characters given in the diagnosis, particularly the smaller flowers and much swollen spur. It also differs in a number of other less obvious features which can be ascertained by careful comparison of the two descriptions. It is clearly a forest plant, so it will be interesting to see if it turns up in the Cameroons and in the Southern Nigerian forests.